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United States Department of the Interior

FISH AND WILDLIFE SERVICE
P.O. Drawer 1190
Daphne, AL 36526

July 8, 1992

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Mr. Wesley B. Crumm, Chief Coastal Programs
U.S. Environmental Protection Agency
Region 4
345 Courtland Street
Atlanta, Georgia 30365

Dear Bo:

As we discussed during our telephone conversation on June 19, I have compiled a brief discussion of the Fish and Wildlife Service's involvement in the Lower Tombigbee River/Mobile River drainage relative to the four CERCLA sites found there. I have also included some data which should give you an overview of the contaminants of concern. You should note that all of these Superfund sites are between 15 and 30 miles upstream of Mobile Bay with the potential to directly impact the estuary.

In 1986, the Environmental Protection Agency (EPA) contacted the U.S. Fish and Wildlife Service (Service) and requested that we conduct Preliminary Natural Resource Surveys (PNRS) at four CERCLA sites on the lower Tombigbee and Mobile Rivers. The intent of the PNRS was to determine if Department of the Interior trust resources were present in the area of these sites and, if so, assess the impacts of the site to those resources.

Our investigations concluded that trust resources did occur at all of these sites but that the available data was inadequate to make a finite assessment. Since that time we have been working with the industries, through EPA, to develop this necessary data base.

The industries have, for the most part, been cooperative in studying contaminant levels in important trust resource habitats immediately adjacent to the plant sites. They have steadfastly refused to extend those studies to adjoining areas. The studies conducted to date have produced some rather disturbing results. For example, Cold Creek Swamp is a wetland adjacent to the Mobile River into which Stauffer Chemical Company had historically discharged mercury contaminated wastewater. As a result, sediments in the swamp now contain over 7000 ppm mercury with fish in the area having over 3 ppm. The Alabama State Health Department was so concerned about these concentrations that it issued a Health Advisory, warning the public not to consume fish from the Cold Creek Swamp area.

Olin Corporation, on the lower Tombigbee River, is another Superfund site in the area with a plant history of discharging mercury contaminated waste. As a result of these past activities, the Olin Basin, a lake between the plant and the river, now has a sediment mercury loading of 290 ppm. Filets (the edible part) from fish collected in the basin were found with 2.2 ppm mercury. This is of particular concern since the Food and Drug Administration Action Level for mercury in edible fish tissue to protect the human consumer is 1.0 ppm.

Ciba Geigy, adjacent to the Olin plant, was a manufacturer of DDT during the 1960's and early 1970's. Because of inadequate waste treatment during that time, the swamp between the plant and the river now contains elevated levels of DDT and its metabolites in the biota and sediments.

There is a contiguous relationship between these wetlands and the adjacent rivers. This is particularly true during the high water periods, which typically persist from four to six months each year when these areas are flooded and become either a backwater or floodway to the river proper. Because of this direct physical connection, it has continually been the Service's position that if significant contamination was discovered in these wetlands, the investigation should be expanded into the adjacent river.

The Service has since 1969 operated a national ambient, water quality monitoring network, collecting fish samples at approximately 110 stations for contaminant analysis. Fish taken from the Tombigbee River station at the Olin and Ciba Geigy plant sites were found to contain the second highest DDT concentrations reported from the network. These concentrations were exceeded only by one station in the Mississippi River delta, an area known historically for some of the heaviest pesticide applications in the country. Mercury was also found to be elevated in fish collected at the Tombigbee station with the 9th highest levels reported from the network.

Between 1988 and 1990, the Service conducted a series of screening surveys to further expand the data base in the river adjacent to these two industries. Largemouth bass were found with total DDT body burdens as high as 34.5 ppm, with mercury values reaching 0.9 ppm. The evidence of a significant source of DDT and mercury impacting the river biota in this area is overwhelming.

The Service has in the past collected eggs from Eastern brown pelicans that nest on an island in Mobile Bay. Chemical Analysis of these of these eggs indicates that DDT and its metabolites are present in the eggs, although the contamination is at a level that does not cause eggshell thinning to a point where they are susceptible to breakage and loss.

Although significant, and in some cases massive, contamination has now been documented in both the wetlands and the adjacent river, (and in some cases even to Mobile Bay) the industries continue to be adamant in their refusal to extend the remedial action investigations into the adjoining rivers. The EPA CERCLA project managers are in agreement with the Service that there is now an adequate supportive data base to justify this expanded effort.

Our concern extends beyond the potential impacts associated with these Superfund sites. An additional eleven major industries are also located along the Mobile and Tombigbee Rivers in this same area. One of these companies, Courtaulds Fibers Inc., is responsible for 40% of all contaminants being discharged within the state of Alabama. All of these companies have a direct connection with the adjacent river via a permitted outfall or groundwater injection wells.

The large number of industries in close proximity to a major estuary, the complexity of their effluents, as well as the unknown circumstances of their past activities are obvious reasons for concern. Our limited investigations as well as the historical data base from the national monitoring network indicate that contaminants are reaching the river and are being concentrated by the aquatic biota.

A comprehensive study is needed to evaluate the impacts of this complex industrial corridor to the adjacent river system and the downstream Mobile Bay estuary. Unfortunately, an investigation of this magnitude is beyond the capabilities of the Service, the state agencies, or apparently even the CERCLA program. However, this is a project that would fit very well into the scope of the National Estuary Program. As I indicated verbally, the Service should have a draft document prepared in the next 60 days which sets forth the findings of a Cumulative Impact Study we conducted concerning the Mobile Bay area from 1988-1991. I will forward you a copy of that draft report as soon as I receive it.

I would appreciate any support that you could offer in the selection of Mobile Bay as one of the additional estuaries for funding during FY 93. Let me know if we can provide any additional information.

Sincerely,

Larry E. Goldman
Field Supervisor